

Ruby Pipeline Project

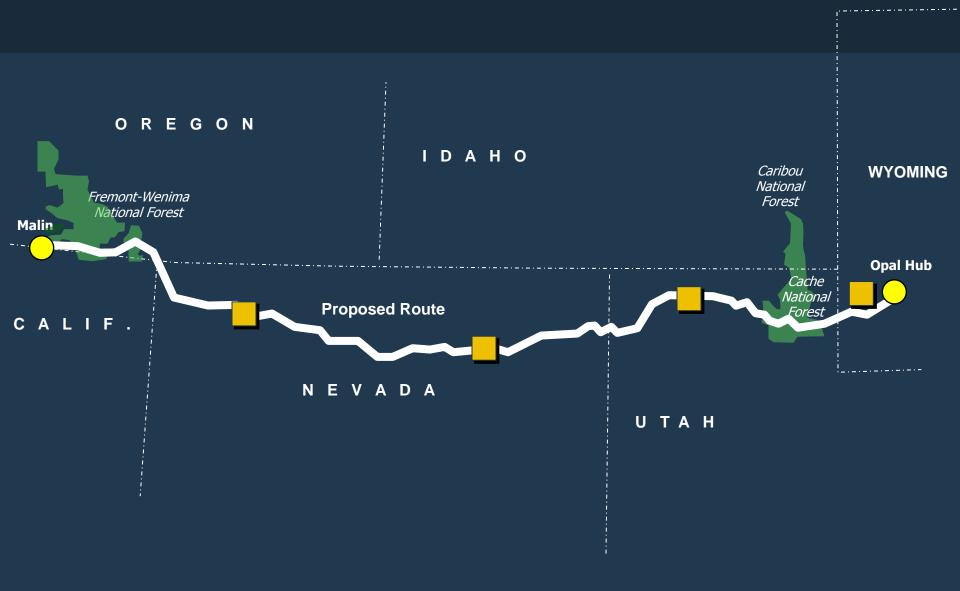
August 2011



Ruby Pipeline Project

- 680 miles of 42-inch Opal, WY to Malin, OR
 - Links Rocky Mountain Gas w/ Western US Markets
 - 7 Construction Spreads:
 - 80 to 120 miles each
 - 400-500 people per spread
- ↑ 1.3 Bcf/d expandable to 2.0 Bcf/d
- ^ 1,440 psig MAOP
- Compression:
 - Four compressor stations
- ∧ 65% + Public Land





Project Schedule

- November 2007: BLM Application
- January 2008: FERC Pre-Filing
- Jan to Sept 2008: Civil Survey
- March / April to Sept 2008: Environmental & Cultural Studies
- January 2009: FERC Filing
- Construction 2010 and 2011
- July 2011: Ready for Service



Safety

- Testing and Benchmarking
 - Construction Inspection
 - Hydrostatically test
 - Internal inspection
- Safety and reliability are of paramount importance
 - Monitor pipeline 24x7, 365 days a year
 - Routine inspection and ongoing maintenance
 - Coordinate closely with local emergency responders



Benefits to Local Community

- Positive local economic impact
 - During Construction
 - Post Construction
- Opportunity for natural gas delivery
 - Existing and expanding markets
 - Price Stability / Competitiveness

Environmental Stewardship

- Green Pipeline
- Agency Requirements
- Resource Reports
- Environmental Impact Statement
- Environmental Inspection
- Restoration & Reclamation



Route Selection & Refinement

Route Selection

- Environmental sensitivity
- Constructability
- Stakeholder input including face-to-face meetings, open houses, and mailings
- Access to producers and markets



Utah Water Sources

Types of Uses

- 1. Hydrostatic Testing
 - 1 mile of pipe = approx 385,000 ga.
 - Approximate gallons used in Utah = 70 Million
- 2. Dust Abatement
 - Each truck load = approx 4,000 ga./load
 - Approx gallons used in Utah = 30.5 Million



Types of Sources

- 1. Surface
- 2. Groundwater
- 3. Municipal (Include both surface and groundwater sources)

Utah Surface Water Sources

- Reservoirs, Canals, Rivers, Creeks, Ponds
- 18 were Permitted for Project
 - 5 were used for Hydrostatic Testing
 - 3 were Used for Both Testing and Dust Abatement
 - 10 were Used for Dust Abatement only

Utah Groundwater and Municipal Sources

- 1. Existing Wells
 - 5 existing wells were permitted
- 2. New Drills
 - Ruby Drilled 3 new wells
- 3. Hydrant
 - Brigham City
- 4. Surface
 - Mantua Reservoir

Hydrostatic Testing Discharge

- All locations were studied both for Environmental Biological and Cultural resources
- Erosion Control Devices were used
- Water had to be discharged in same hydrological basin

Number of Discharge Locations by County

- 1. Rich
 - 6 Discharge Locations
 - Approx 25 miles = approx 9.6 million ga. discharged
- 2. Cache
 - 11 Discharge Locations
 - Approx 27 Miles = approx 10.4 million ga. discharged
- 3. Box Elder
 - 24 Discharge Locations
 - Approx 130 miles = approx 50 million ga. discharged

Water Permitting Challenges

- 1. Permitting process
 - Agreement with Landowner
 - Calculating acreage for landowner to dry up
 - State approval timeframe for permits to meet construction time frames
 - Navigating water ownership;
 - Canal company certificates
 - Water shares
 - Individual water rights
 - State water rights

Mitigation

 Landowner reimbursement for drying up acreages and volume of water used



Water Permitting Challenges

2. Drilling wells

- Dry hole
- Plug and abandon wells per State requirements
- When complete, appropriately convey water well improvements for surface owner beneficial use

3. Regulatory

- Later timeframe for start of construction
- Need to extend State authorizations and landowner approvals